

### Amendments to the Claims

Please amend the claims as indicated below, where underlining identifies added language and strikethrough identifies deleted language.

1. (Currently Amended) Pigment with at least one surface area whose smallest measurement is at least a multiple of the largest wave length (approximately 400 nm) of ultraviolet light, whereby the pigment presents a defined diffractive structure on at least one surface area, which is at least a multiple of the largest wave length (approximately 400 nm) of ultraviolet light, wherein the pigment is a cutout from a hologram that presents a periodical diffractive structure stretching itself over the entire pigment, which is an overlay of differently determined spatial frequencies and spatial alignments, and comprises an inner diffractive structure which is surrounded by ~~an epitaxially~~ a graphoeptaxially applied optically permeable sealant material.
2. (Original) Pigment according to claim 1 characterized in that the smallest measurement of the surface area is at least a multiple of the largest wave length (approximately 800 nm) of visible light and that the pigment on the least surface area presents at least one defined diffractive structure that has a spatial periodicity with one spatial period that is at least a multiple of the largest wave length (approximately 800 nm) of visible light.
3. (Currently Amended) Pigment according to claim 1 characterized in that it is ~~has~~ a platelet ~~like~~ shape, of which at least one surface area is the entire surface area on one of the sides of the platelet.
4. (Previously Presented) Pigment according to claim 1 characterized in that it presents a periodic diffractive structure extending over the entire pigment with a defined spatial frequency and spatial alignment.
5. (Previously Presented) Pigment according to claim 1 characterized in that it presents various areas with, in each case, divergent periodic diffractive structure.
6. (Original) Pigment according to claim 5 characterized in that the different areas with a divergent periodic diffractive structure in each case differ in the spatial frequency and/or spatial alignment of the periodic structure of the prevailing area.

7. (Previously Presented) Pigment according to claim 1 characterized in that it presents a diffractive structure for ultraviolet light and a diffractive structure for visible light.
8. (Currently Amended) Pigment according to claim 1 characterized in that it presents a rotation-symmetrical diffraction ~~gating~~ grating with a cluster of concentrically circular diffraction lines.
9. (Previously Presented) Pigment according to claim 1 characterized in that it presents a star-shaped or polygonal diffraction grating with a cluster of concentrically polygonal diffraction lines.
10. (Canceled)
11. (Canceled)
12. (Previously Presented) Pigment according to claim 1 characterized in that it comprises optically permeable material, whereby the defined diffractive structure is conferred by a defined spatial allocation of the pigment thickness and/or the refraction index of the pigment material.
13. (Previously Presented) Pigment according to claim 1 characterized in that it contains an optically permeable substance in the interior of which a reflective layer is arranged.
14. (Previously Presented) Pigment according to claim 1 characterized in that the defined diffractive structure is conferred by a defined spatial allocation rises and depressions on a reflective surface layer of the pigment.
15. (Canceled)
16. (Currently Amended) Pigment according to claim 3 characterized in that ~~its dimensions at the platelet level are a size is in the range from~~ between 5  $\mu\text{m}$  and 200  $\mu\text{m}$  ~~and especially in the range between 10  $\mu\text{m}$  and 30  $\mu\text{m}$ .~~
17. (Original) Pigment according to claim 16 characterized in that its thickness is in the range between 0.5  $\mu\text{m}$  and 5  $\mu\text{m}$ .

18. (Previously Presented) Pigment according to claim 1 characterized in that it is formed from at least two layers lying on top of each other.

19. (Currently Amended) Pigment according to claim 1 characterized in that it has a defined diffractive surface structure on both platelet ~~levels~~ layers.

20. (Previously Presented) Pigment according to claim 1 characterized in that the sealant comprises a hydrophobic substance.

21. (Currently Amended) Pigment according to claim 1 characterized in that the sealant comprises a ~~hydrophobic~~ hydrophilic substance.

22. (Currently Amended) Pigment according to claim 1 characterized in that ~~the~~ a sealant on ~~the~~ a first platelet ~~level~~ layer comprises a hydrophobic substance and a sealant on ~~the~~ a second platelet ~~level~~ layer ~~from~~ comprises a hydrophilic substance.

23. (Currently Amended) The procedure to produce pigments with at least one surface area whose smallest measurement is at least a multiple of the largest wave length (approximately 400 nm) of ultraviolet light, whereby the pigment presents a defined diffractive structure on at least one surface area, which is at least a multiple of the largest wave length (approximately 400 nm) of ultraviolet light, and wherein the pigment has an inner diffractive structure which is surrounded by ~~an epitaxially~~ a graphoepitaxially applied sealant material, comprising the following steps: (a) stamping a defined diffractive structure into or onto a ~~foil-like~~ carrier medium; (b) vapor-coating of the diffractive structure with reflective material by graphoepitaxy; (bc) coating recoating of the defined diffractive structure on the medium with a transparent sealant substance by epitaxy graphoepitaxy; (d) separation of the structure achieved in this way from the carrier medium and (ee) pulverizing the foil-like-medium structure produced in Steps (a) to (d) and (b) into pigment particles.

24. (Original) Procedure according to claim 23 characterized in that Step (a) is carried out by hot stamping, Thixo stamping or reaction embossing.

25. (Currently Amended) Procedure according to claim 23 characterized in that Step (a) is carried out by lithography, ~~specifically by electron radiation or optical lithography~~.

26. (Original) Procedure according to claim 23 characterized in that Step (a) is also carried out by scratching the surface of the medium.
27. (Canceled)
28. (Canceled)
29. (Currently Amended) Procedure according to claim 23 characterized in that Step (b) is carried out by vaporizing, ~~in particular,~~ with metallic fumes.
30. (Currently Amended) Procedure according to claim 23 characterized in that Step (ee) also entails snipping the foil-like medium.
31. (Canceled)
32. (Canceled)
33. (Currently Amended) Procedure according to claim 23 characterized in that the pulverization in Step (ee) is carried out by wet pulverization.
34. (Currently Amended) Pigment powder, comprising pigments with at least one surface area whose smallest measurement is at least a multiple of the largest wave length (approximately 400 nm) of ultraviolet light, whereby the pigment presents a defined diffractive structure on at least one surface area, which is at least a multiple of the largest wave length (approximately 400 nm) of ultraviolet light, and wherein the pigment has an inner diffractive structure which is surrounded by ~~an epitaxially a~~ graphoepitaxially applied sealant material produced by (a) stamping a defined diffractive structure into or onto a foil-like carrier medium; (b) vapor-coating of the diffractive structure with reflective material by graphoepitaxy; (b~~c~~) ~~coating~~ recoating of the defined diffractive structure on the medium with a transparent sealant substance by ~~epitaxy~~ graphoepitaxy; (d) separation of the structure achieved in this way from the carrier medium; and (ee) pulverizing the ~~foil-like medium structure~~ structure produced in Steps (a) to (d) ~~and (b)~~ into pigment particles.

35. (Currently Amended) Pigment powder according to claim 34 characterized in that the pigments are coated with ~~an auxiliary~~ a wetting agent.

36. (Canceled)

37. (Currently Amended) ~~Print color~~Ink that contains a pigment powder produced in accordance with one of the claims ~~from 34 to 36~~ or 35.

38. (Currently Amended) Lacquer that contains pigment powder produced in accordance with one of the claims ~~from 34 to 36~~ or 35.

39. (Currently Amended) Transparent plastic, ~~specifically PET, PEN, PST, PA, PC,~~ which contains a pigment powder produced in accordance with one of the claims ~~from 34 to 36~~ or 35.

40. (Currently Amended) Document, which, for its authentication, presents one of the following characteristics:

- a printed imprint from ~~print color~~ as well as ink in accordance with claim 37;
- a label made from transparent synthetic material in accordance with claim 39.

41. (New) Pigment according to claim 16 characterized in that its size is in the range from between 10  $\mu\text{m}$  and 30  $\mu\text{m}$ .

42. (New) Transparent plastic according to claim 39, characterized in that is selected from the group consisting of polyethylene terephthalate, polyethylene naphthalate, polystyrene, polyamides and polycarbonates.

43. (New) Procedure according to claim 23 characterized in that Step (a) is carried out by one of the following: electron radiation and optical lithography.